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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/611,772	07/07/2000	Hans Kroner	GR 99 P 2263	7415

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EXAMINER	
TRAN, TUAN A	

ART UNIT	PAPER NUMBER
2682	17

DATE MAILED: 10/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/611,772	KRONER, HANS	
	Examiner	Art Unit	
	Tuan A Tran	2682	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *07 July 2000* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *14* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made

.

1. Claims 1-14, 21-22, 27-28 and 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ranta (6,339,697) in view of Zehavi (6,496,543).

Regarding claims 1-2, 7, 11 and 30, Ranta discloses a method and apparatus for allocating a transmission capacity to connections in a radio communication system wherein the radio communication system is a mobile radio system (See fig. 1), comprising: allocating a transmission rate to a connection established via a radio communication interface between a base transceiver station and a subscriber station in at least one of downlink and uplink directions in dependence of a connection-specific load and/or level of interference of the radio communication interface (See figs. 1-3 and col. 1 lines 34-55, col. 4 lines 4-43, col. 5 lines 9-36, col. 6 line 50 to col. 7 lines 15). However, Ranta does not mention that allocating a transmission rate to a connection established via a radio communication interface between a base transceiver station and a subscriber station in dependence of a connection-specific path loss of the radio communication interface and distance between the base transceiver and the subscriber station. Zehavi teaches the step of allocating the transmission rate in dependence of a

connection-specific path loss of the radio communication interface and distance between the base transceiver and the subscriber station (See fig. 2 and Abstract, col. 2 lines 19-36, col. 4 lines 37-54). Since Ranta suggests to define the interference load by measuring the signal quality (See col. 7 lines 30-36) and it is well known in the art that there are many indicators of signal quality wherein the indicators includes distance, path loss... etc; therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the Zehavi's teaching into the Ranta's method by allocating the transmission rate in dependence of path loss and distance for the advantage of expanding the application of the system to various parameters.

Claim 32 is rejected for the same reasons as set forth in claim 1, as apparatus.

Regarding claims 3 and 10, Ranta & Zehavi disclose as cited in claim 1. Ranta further discloses the step of allocating the transmission rate in dependence of an interference situation at a location of the subscriber station in a radio cell of the base transceiver station or a current load in the radio cell of the base transceiver station (See col. 4 lines 4-43, col. 5 lines 9-36).

Regarding claims 4-6, Ranta further discloses the step of providing a variable transmission rate for transmitting at least one service with the connection wherein non-real-time service and real-time service as the at least one service and carrying out an adaptive coding (See col. 1 lines 20-33).

Regarding claims 8-9, Ranta & Zehavi disclose as cited in claim 1. However, they do not mention the step of varying the transmission rate in dependence of a relative transmitter power or an absolute transmitter power of the connection. Since the

relationship between the load interference and transmission power including relative or absolute transmitter power are common in the art, therefore it would be obvious to take relative or absolute transmitter power into consideration in allocating transmission rate for the advantage of expanding the application of the system to various parameters.

Regarding claim 12, Ranta further discloses the step of carrying out a subscriber separation in a radio communication system in accordance with a CDMA method (See col. 3 lines 15-31).

Regarding claims 13-14, Ranta & Zehavi disclose as cited in claim 1. Ranta further discloses the step of providing a set of transmission rate wherein the transmission rate being defined by respective spreading codes and inherently respective spreading factors (See col. 3 lines 15-31). However, they do not mention the step of using orthogonal spreading codes in at least one of downlink or uplink directions. Orthogonal spreading coding technique is well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use orthogonal spreading codes in the system as disclosed by Ranta & Zehavi for the advantage of reducing co-channel interference in communications between base stations and mobile stations.

Regarding claim 21, Ranta & Zehavi disclose as cited in claim 1. However, they do not mention the step of using path loss measurements for allocating the transmission rate, carried out by the subscriber station, for handover purpose. Since Ranta discloses the step of using load interference measurements for allocating the transmission rate (See figs. 2-3, col. 5 lines 37-47), carried out by the subscriber station (See col. 7 lines

16-22), for the handover purpose (See col. 6 lines 31-49), and Ranta also suggests to define the interference load by measuring the signal quality (See col. 7 lines 30-36) and it is well known in the art that there are many indicators of signal quality wherein the indicators includes load interference, distance, path loss... etc; therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to allocate the transmission rate in dependence of path loss measurements, carried out by the subscriber station, for the advantage of expanding the application of the system to various parameters as well as to both end (base transceiver and subscriber stations) of the system.

Regarding claim 22, Ranta & Zehavi disclose as cited in claim 1. However, they do not mention the step of allocating the transmission rate with an overload control function based on the path loss measurements. Since Ranta discloses the step of using the load interference control function for allocating the transmission rate (See figs. 2-3) and the inter-relationship between load, interference and path loss is well known in the art; therefore it would be obvious to establish the step of allocating the transmission rate with the overload control function based on path loss measurements in order to expand the capability of the system, as disclosed by Ranta & Zehavi, to various parameters.

Regarding claim 27, Ranta & Zehavi disclose as cited in claim 1. Ranta further disclose the communication system utilizes CDMA wherein in the CDMA scenario, a single wideband is used for all users in the downlink direction (See col. 4 lines 63-66). However, they do not mention the step of allocating a transmission rate in dependence

of a transmitter power. Since the relationship between the load interference and transmission power is common in the art, therefore it would be obvious to take transmitter power into consideration in allocating transmission rate for the advantage of expanding the application of the system to various parameters.

Regarding claim 28, Ranta further discloses the step of carrying out a joint detection method at a reception end in at least one of downlink and uplink directions (See col. 7 lines 16-22).

Regarding claim 29, Ranta & Zehavi disclose as cited in claim 1, but they do not mention organizing the radio communication interface in accordance with a TDD method. TDD method, wherein transmissions in a downlink direction and in an uplink direction at separate times in a same frequency band, is a well-known modulation skim in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the system as disclosed by Ranta & Zehavi utilized TDD for the advantage of extending the applications of the system.

Regarding claim 31, Ranta & Zehavi disclose as cited in claim 1, but they do not mention providing the radio communication system as a wireless subscriber line system. Wireless subscriber line system is well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the system as disclosed by Ranta & Zehavi structured as a wireless subscriber line system in order to provide different services to users.

2. Claims 15-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ranta (6,339,697) in view of Zehavi (6,496,543) as applied to claim 1 above, and further in view of Johansson et al. (6,473,399) and Rathonyi et al. (6,359,877).

Regarding claims 15-20, Ranta & Zehavi disclose as cited in claim 1. Ranta in view of Zehavi further discloses the step of allocating a long-term transmission rate in dependence of the path loss (See col. 7 lines 45-48) and allocating the transmission rate in a soft handover situation by taking into account all possible signal path (See col. 5 line 9 to col. 6 line 49). However, they do not mention the step of allocating the transmission rate by using a Transport Format Set, selected by the MAC layer, of the configuration/reconfiguration, restriction procedures and utilization-level and connection-acceptance control function of the RRC layer. Johansson teaches the same radio communication system as disclosed by Ranta & Zehavi wherein the MAC layer selects Transport Format Set in accordance to the control of RRC layer (See figs. 3-4 and col. 5 line 66 to col. 6 line 41), and wherein the control of the RRC is defined by the configuration/reconfiguration, restriction procedures and utilization-level and connection-acceptance control function and TF (Transport Formats) is defined by the transmission rate as disclosed by Rathonyi (See col. 3 lines 17-35, col. 5 lines 48-58). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the teaching of Johansson & Rathonyi in modifying the system as disclosed by Ranta & Zehavi by utilizing the protocol layers for the advantage of achieving interconnectivity between peer entities residing within mobile stations and cellular switching systems with high QoS (quality of service).

3. Claims 23-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ranta (6,339,697) in view of Zehavi (6,496,543) as applied to claim 1 above, and further in view of Pehrson (6,339,705).

Regarding claim 23, Ranta & Zehavi disclose as cited in claim 1. However, they fail to show signaling a transmitter power for a carrier of the base transceiver station to a RNC via an Iub interface. Pehrson discloses signaling a transmitter power for a carrier of the base transceiver station to a RNC via an Iub interface (See fig. 1 and col. 1 lines 24-46). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modified the system as disclosed by Ranta & Zehavi by Pehrson in order to control transmission power properly.

Regarding claim 24, Ranta & Zehavi disclose as cited in claim 1, but they fail to show signaling a transmitter power for a carrier of the base transceiver station to a RNC via an Iub interface by adding an appropriate field within an Iub/Iur user frame protocol. It is necessary to establish the step of adding an appropriate field within an Iub/Iur user frame protocol in order to rout the control signaling messages properly within cellular switching systems.

Regarding claims 25-26, Ranta & Zehavi disclose as cited in claim 1, but they fail to show signaling a transmitter power for a carrier of the base transceiver station to a RNC via an Iub interface by using independent periodic signaling message or event-controlled signaling message. Pehrson discloses signaling a transmitter power for a carrier of the base transceiver station to a RNC via an Iub interface (See fig. 1 and col.

1 lines 24-46). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modified the system as disclosed by Ranta & Zehavi and further using independent periodic signaling message or event-controlled signaling message as intended use in order to extend the capability of the system as well as to control transmission power properly.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Le Strat et al. (6,134,220) discloses method for adapting the air interface in a mobile radio system and corresponding base transceiver station, mobile station and transmission mode.
- Chennakeshu et al. (5,991,331) discloses system for improving the quality of a received radio signal.

Response to Arguments

Applicant's arguments filed 07/25/2003 have been fully considered but they are not persuasive.

a. The Applicant argued that this is not correct when the Examiner has asserted that "distance" and "path loss" are indicators for signal quality, and one of ordinary skill would not have obtained any suggestion to modify the teaching in Zehavi (See Remark, page 2 third paragraph, page 3 third paragraph). The Examiner respectfully disagrees with the Applicant's arguments. The Examiner would like to

present U.S. Patent 6,134,220 (See col. 10 lines 4-15) and U.S. Patent 5,991,331 (See col. 1 lines 30-38) as evidences to support for the Examiner's assertion of distance and path loss are indicators for signal quality. Examiner also recognizes that the Applicants should consider the references as a whole since the test for combining references is what the combination of disclosures taken as a whole would suggest to one of ordinary skill in the art. In this case, Ranta teaches a method of allocating transmission rate in dependence of interference load wherein the signal quality is used to define the interference load. Since, path loss, distance... etc are indicators for signal quality, and Zehavi teaches the step of allocating the transmission rate in dependence of a connection-specific path loss; therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the Zehavi's teaching into the Ranta's method by allocating the transmission rate in dependence of path loss and distance for the advantage of expanding the application of the system to various parameters. For that reasons, the Examiner remains the same rejections.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Tuan Tran** whose telephone number is **(703) 605-4255**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Vivian Chin**, can be reached at **(703) 308-6739**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Tuan Tran

AU 2682

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VIVIAN CHIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

10/6/03